OIPE IAP22
JUL 10 2006
PATENT & TRADEMARK OFFICE

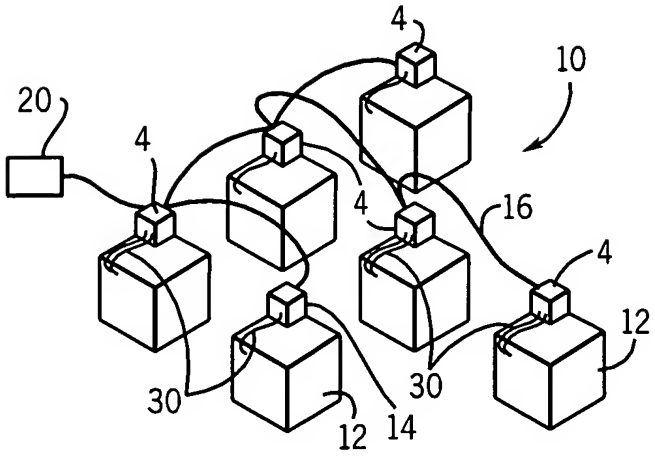


FIG. 1

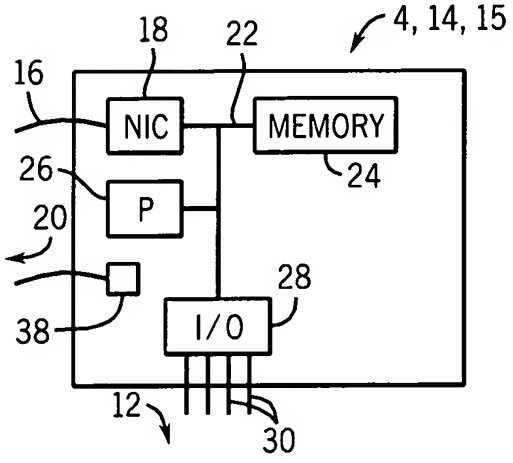


FIG. 2

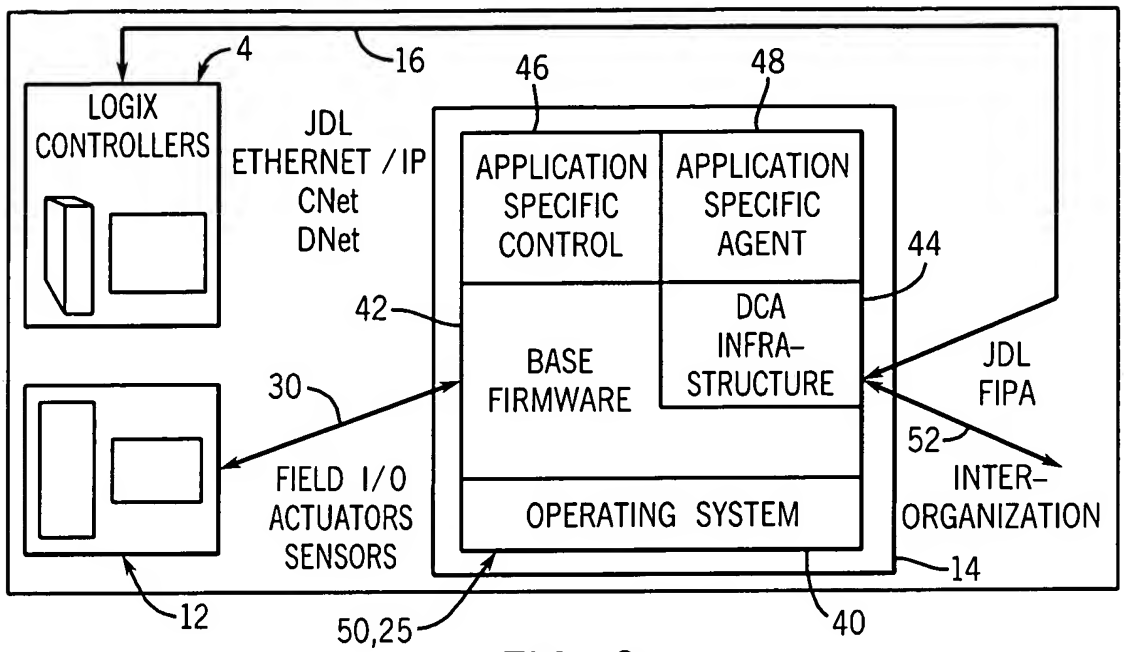
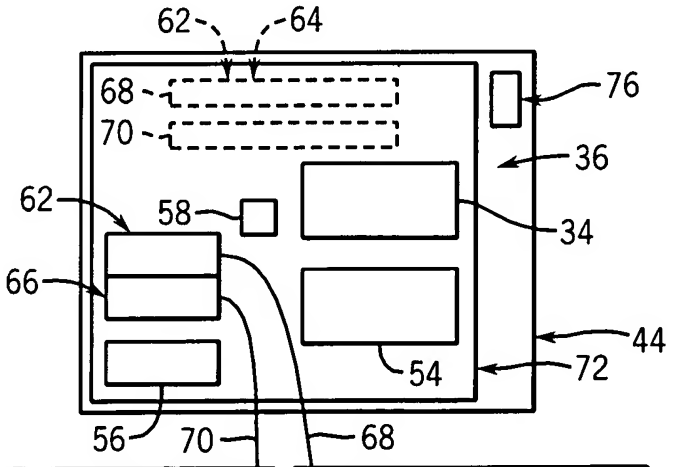


FIG. 3



AGENT	CAPABILITY
VALVE 1	OPEN; CLOSE
VALVE 2	OPEN; CLOSE
SUPPLY 1	DELIVER
LOAD 1	ACCEPT
LOAD 2	ACCEPT
PUMP 1	ON; OFF

AGENT	ADDRESS
VALVE 1	A1
VALVE 2	B1
SUPPLY 1	C1
LOAD 1	A2
LOAD 2	D1
PUMP 1	E1

FIG. 4

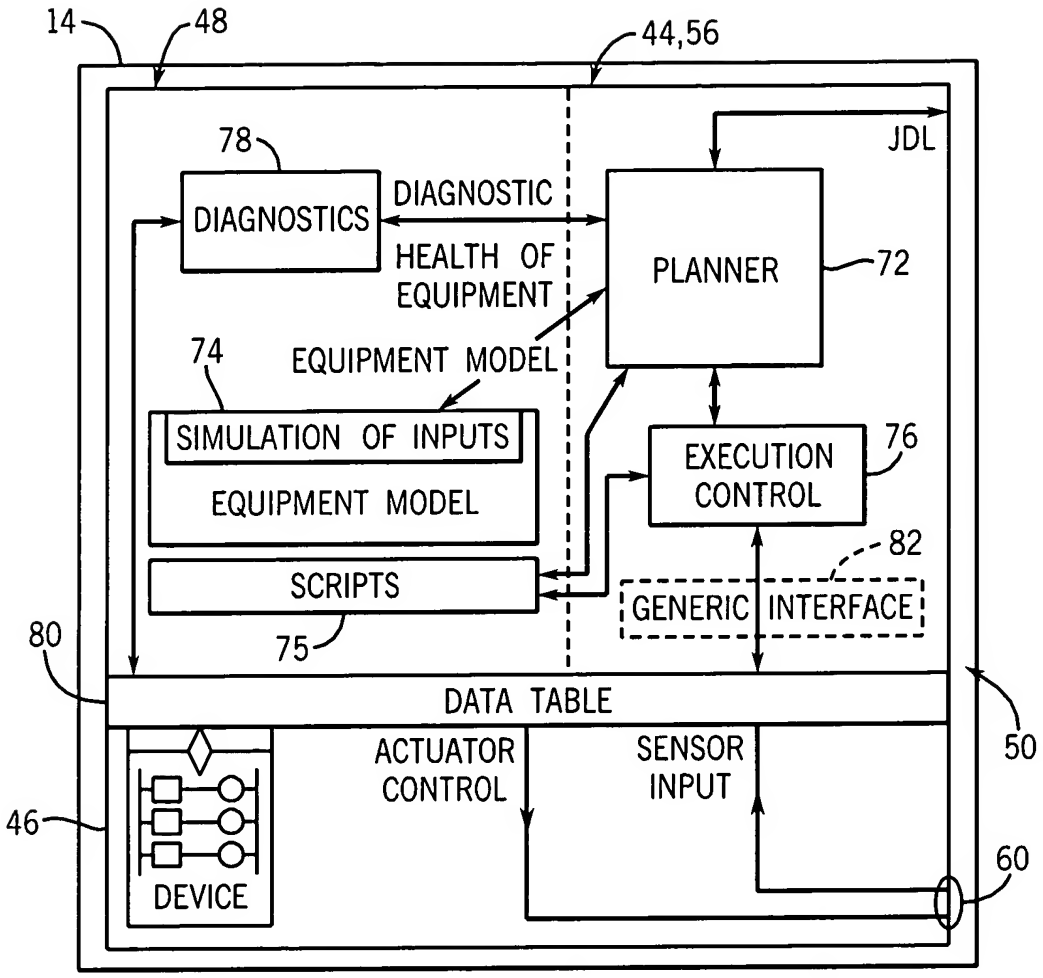

14
48
44,56
78
DIAGNOSTICS
DIAGNOSTIC
HEALTH OF EQUIPMENT
JDL
PLANNER
72
74
EQUIPMENT MODEL
SIMULATION OF INPUTS
EQUIPMENT MODEL
EXECUTION CONTROL
76
82
SCRIPTS
GENERIC INTERFACE
75
80
DATA TABLE
50
ACTUATOR CONTROL
SENSOR INPUT
46
60
DEVICE

FIG. 5

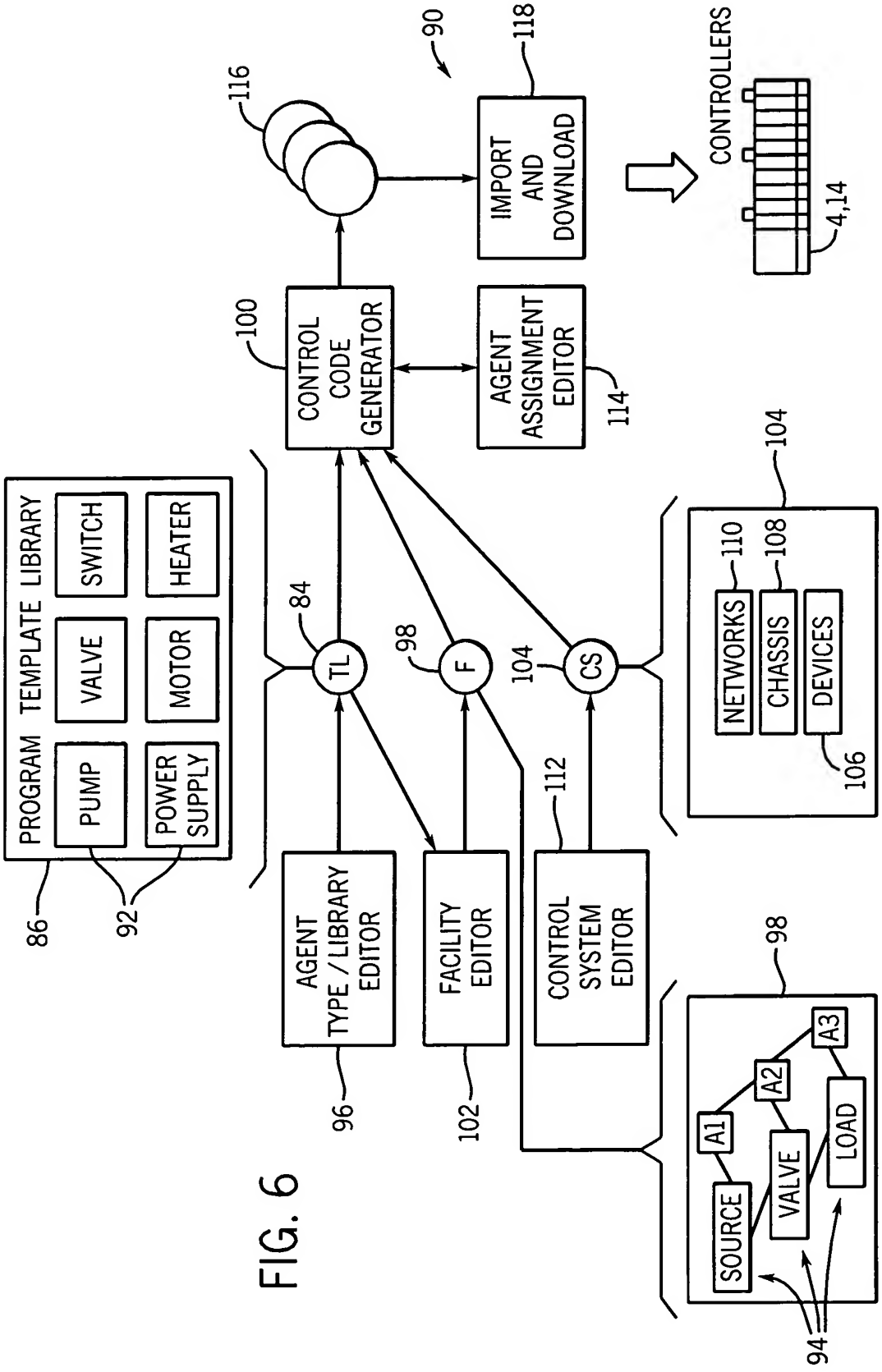

PROGRAM TEMPLATE LIBRARY
PUMP
VALVE
MOTOR
SWITCH
HEATER
POWER SUPPLY
86
92
84
TL
98
F
104
CS
112
AGENT TYPE / LIBRARY EDITOR
FACILITY EDITOR
CONTROL SYSTEM EDITOR
96
102
100
CONTROL CODE GENERATOR
AGENT ASSIGNMENT EDITOR
114
116
90
118
IMPORT AND DOWNLOAD
CONTROLLERS
4,14
104
NETWORKS
CHASSIS
DEVICES
110
108
106
98
SOURCE
A1
VALVE
A2
LOAD
A3
94

FIG. 6

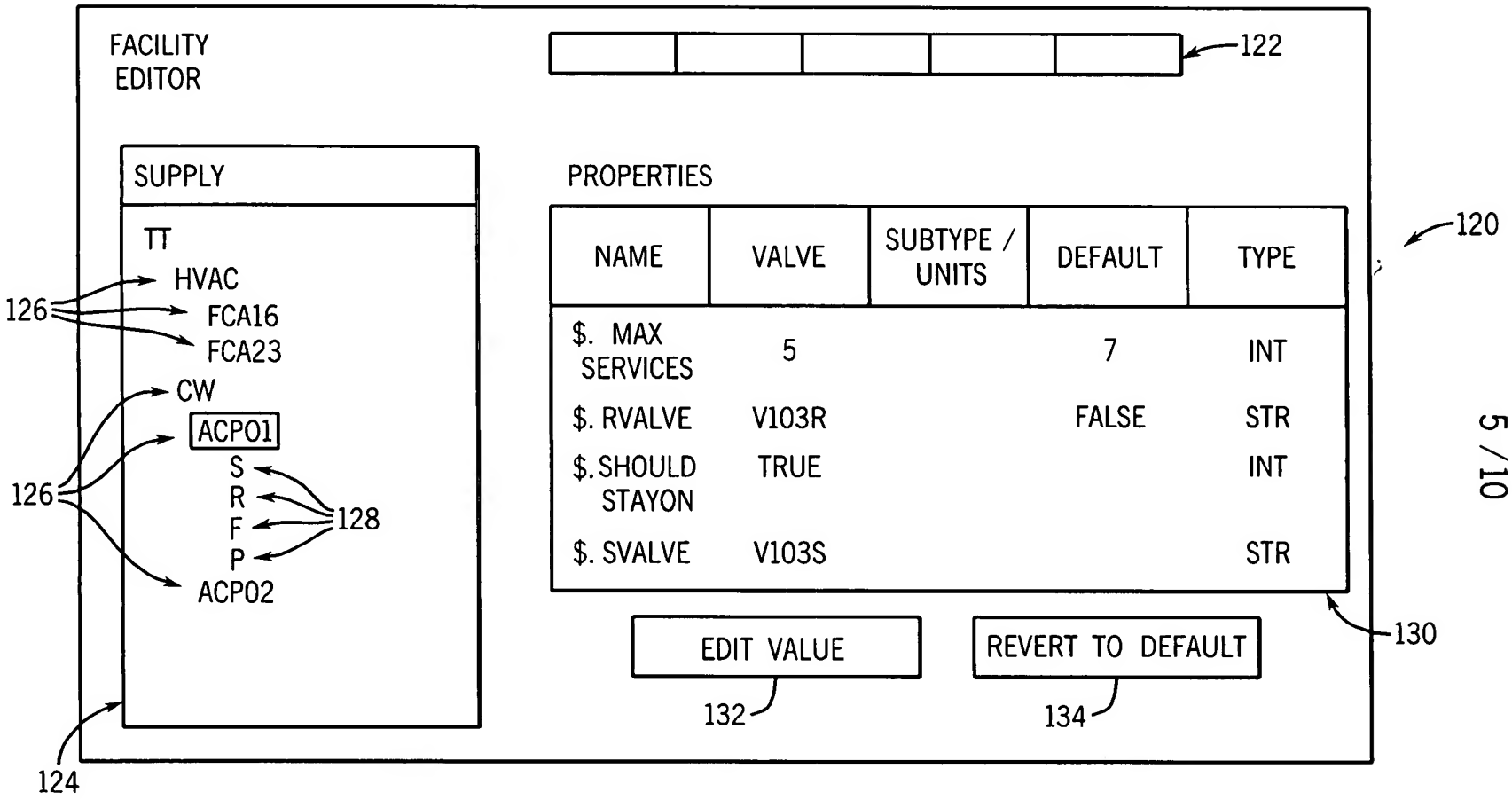

FACILITY EDITOR
122
SUPPLY
TT
HVAC
FCA16
FCA23
CW
ACP01
S
R
F
P
ACP02
126
126
128
124
PROPERTIES
NAME
VALVE
SUBTYPE / UNITS
DEFAULT
TYPE
$. MAX SERVICES
5
7
INT
$. RVALVE
V103R
FALSE
STR
$. SHOULD STAYON
TRUE
INT
$. SVALVE
V103S
STR
120
130
EDIT VALUE
REVERT TO DEFAULT
132
134

FIG. 7

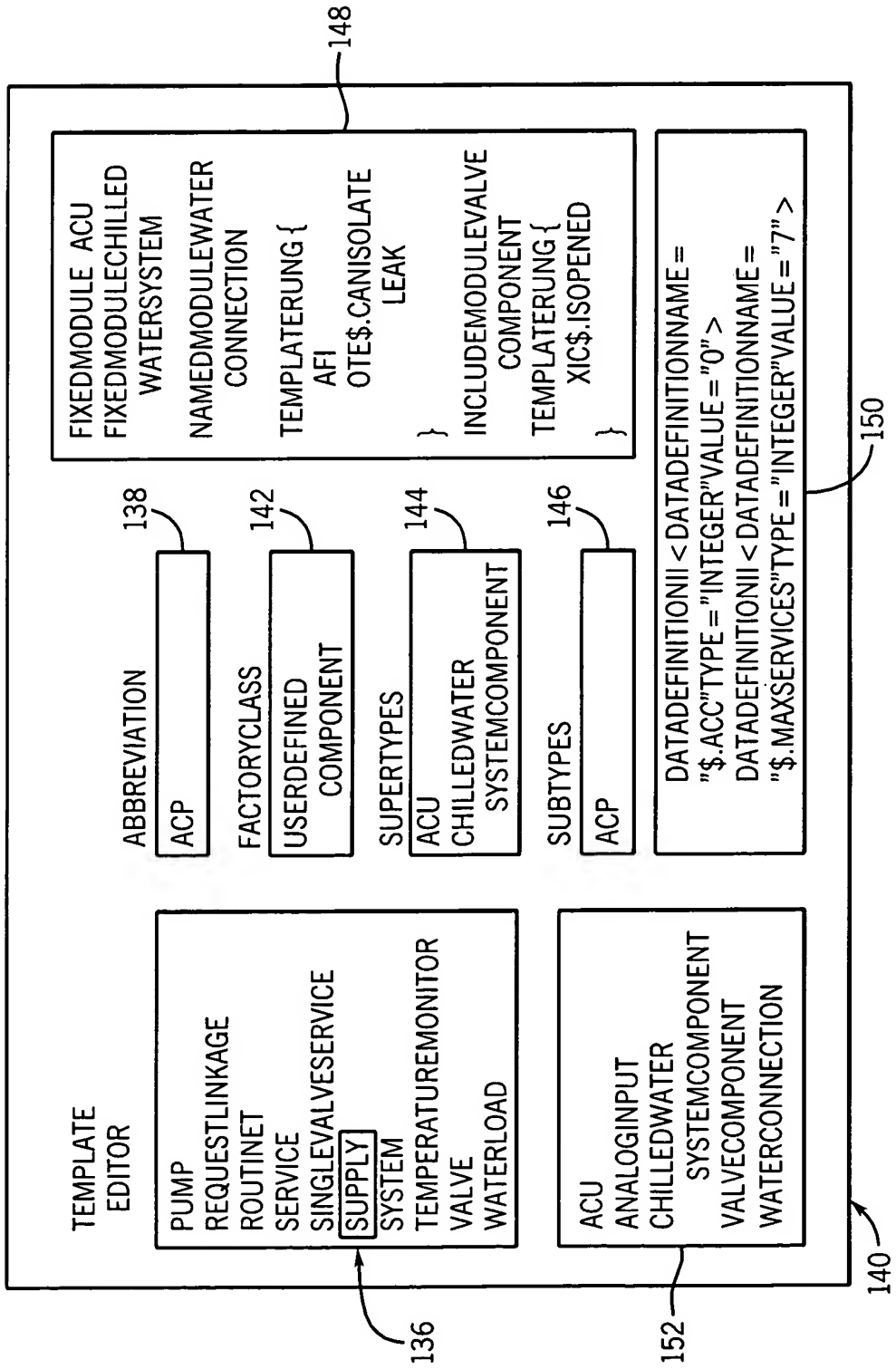

TEMPLATE EDITOR
PUMP
REQUESTLINKAGE
ROUTINET
SERVICE
SINGLEVALVESERVICE
SUPPLY
SYSTEM
TEMPERATUREMONITOR
VALVE
WATERLOAD
ACU
ANALOGINPUT
CHILLEDWATER
SYSTEMCOMPONENT
VALVECOMPONENT
WATERCONNECTION
ABBREVIATION
ACP
138
FACTORYCLASS
USERDEFINED
COMPONENT
142
SUPERTYPES
ACU
CHILLEDWATER
SYSTEMCOMPONENT
144
SUBTYPES
ACP
146
FIXEDMODULE ACU
FIXEDMODULECHILLED
WATERSYSTEM
NAMEDMODULEWATER
CONNECTION
TEMPLATERUNG{
AFI
OTE$.CANISOLATE
LEAK
}
INCLUDEMODULEVALVE
COMPONENT
TEMPLATERUNG{
XIC$.ISOPENED
}
148
DATADEFINITIONII<DATADEFINITIONNAME=
"$.ACC"TYPE="INTEGER"VALUE="0">
DATADEFINITIONII<DATADEFINITIONNAME=
"$.MAXSERVICES"TYPE="INTEGER"VALUE="7">
150
136
152
140

FIG. 8

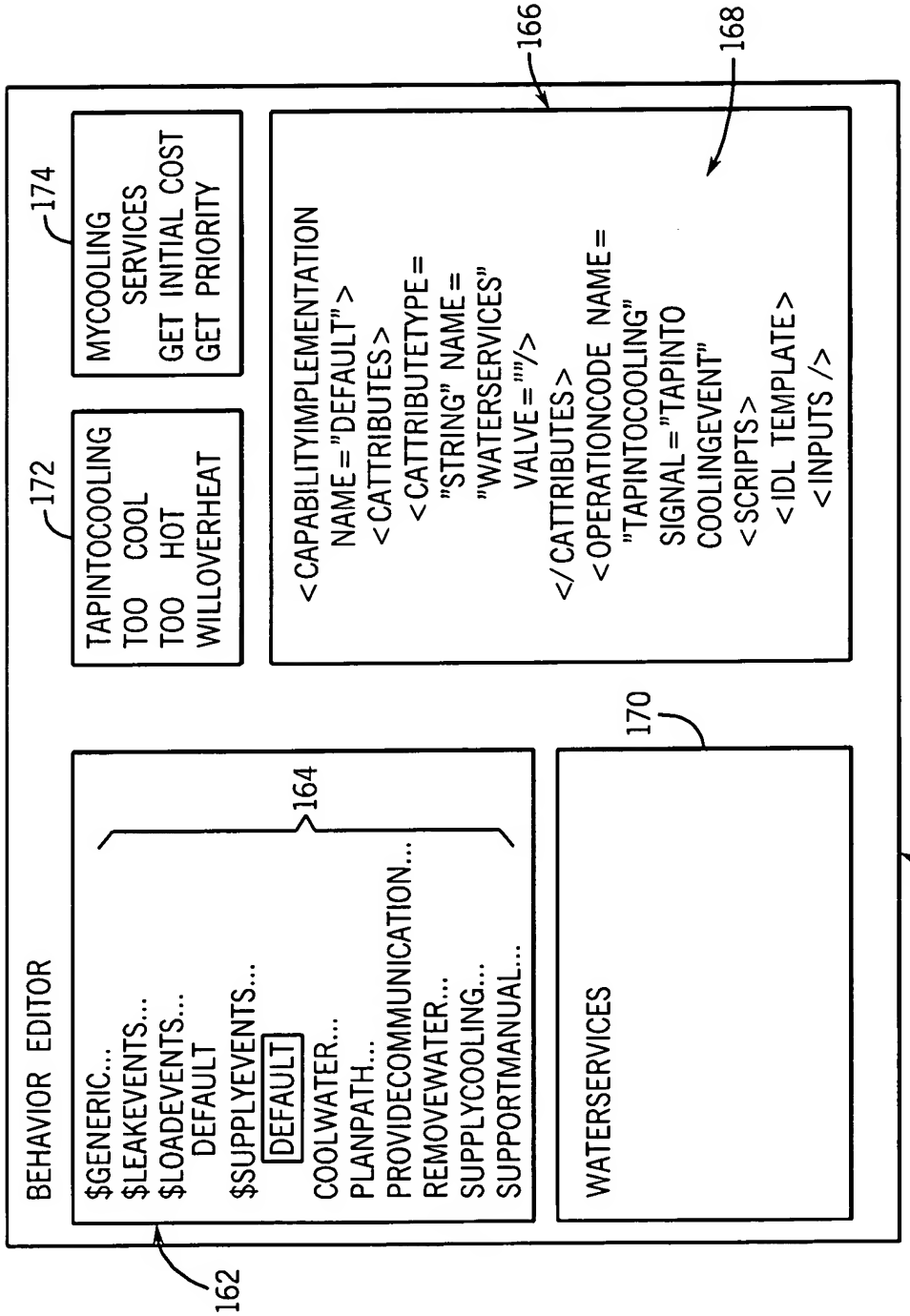

BEHAVIOR EDITOR
$GENERIC...
$LEAKEVENTS...
$LOADEVENTS...
DEFAULT
$SUPPLYEVENTS...
DEFAULT
COOLWATER...
PLANPATH...
PROVIDECOMMUNICATION...
REMOVEWATER...
SUPPLYCOOLING...
SUPPORTMANUAL...
164
162
WATERSERVICES
170
160
TAPINTOCOOLING
TOO COOL
TOO HOT
WILLOVERHEAT
172
MYCOOLING
SERVICES
GET INITIAL COST
GET PRIORITY
174
<CAPABILITYIMPLEMENTATION
NAME="DEFAULT">
<CATTRIBUTES>
<CATTRIBUTETYPE=
"STRING" NAME=
"WATERSERVICES"
VALVE=""/>
</CATTRIBUTES>
<OPERATIONCODE NAME=
"TAPINTOCOOLING"
SIGNAL="TAPINTO
COOLINGEVENT"
<SCRIPTS>
<IDL TEMPLATE>
<INPUTS />
166
168

FIG. 9

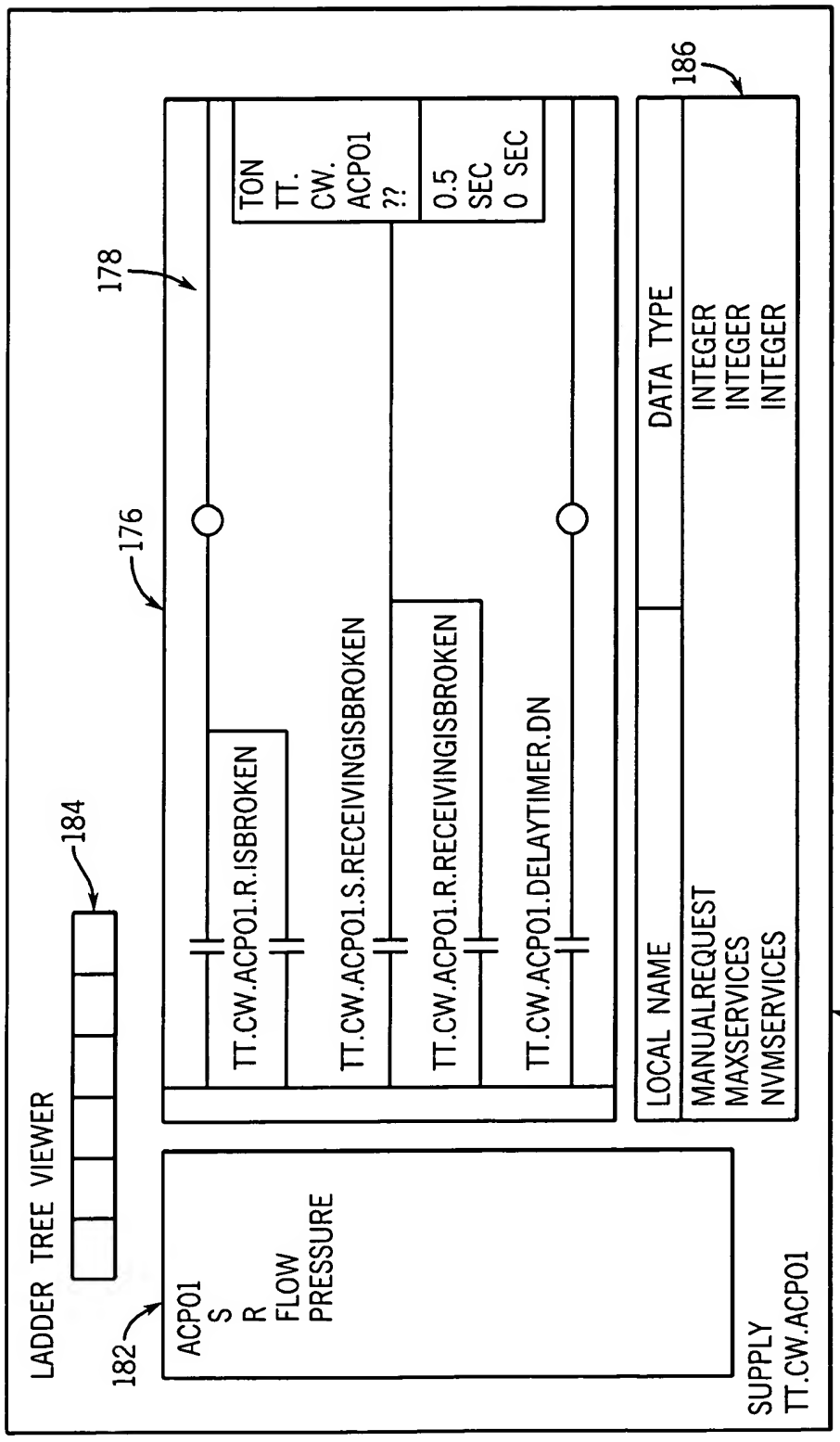

LADDER TREE VIEWER
184
182
ACP01
S
R
FLOW
PRESSURE
SUPPLY
TT.CW.ACP01
178
176
TT.CW.ACP01.R.ISBROKEN
TT.CW.ACP01.S.RECEIVINGISBROKEN
TT.CW.ACP01.R.RECEIVINGISBROKEN
TT.CW.ACP01.DELAYTIMER.DN
TON
TT.
CW.
ACP01
??
0.5
SEC
0 SEC
186
LOCAL NAME
DATA TYPE
MANUALREQUEST
MAXSERVICES
NVMSERVICES
INTEGER
INTEGER
INTEGER
180

FIG. 10

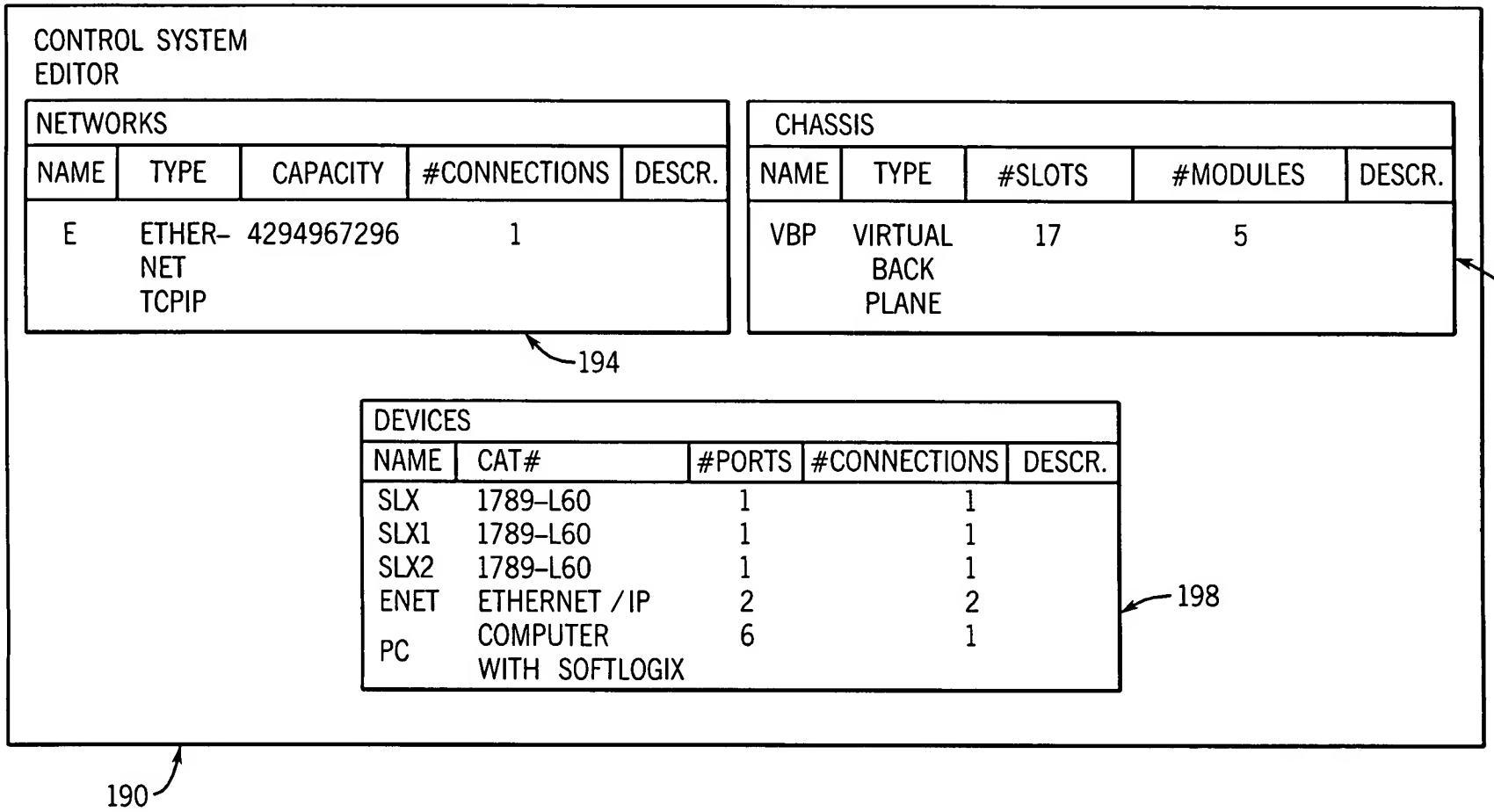

CONTROL SYSTEM
EDITOR
NETWORKS
NAME
TYPE
CAPACITY
#CONNECTIONS
DESCR.
E
ETHER-NET TCPIP
4294967296
1
194
CHASSIS
NAME
TYPE
#SLOTS
#MODULES
DESCR.
VBP
VIRTUAL BACK PLANE
17
5
196
DEVICES
NAME
CAT#
#PORTS
#CONNECTIONS
DESCR.
SLX
1789-L60
1
1
SLX1
1789-L60
1
1
SLX2
1789-L60
1
1
ENET
ETHERNET / IP
2
2
PC
COMPUTER WITH SOFTLOGIX
6
1
198
190

FIG. 11

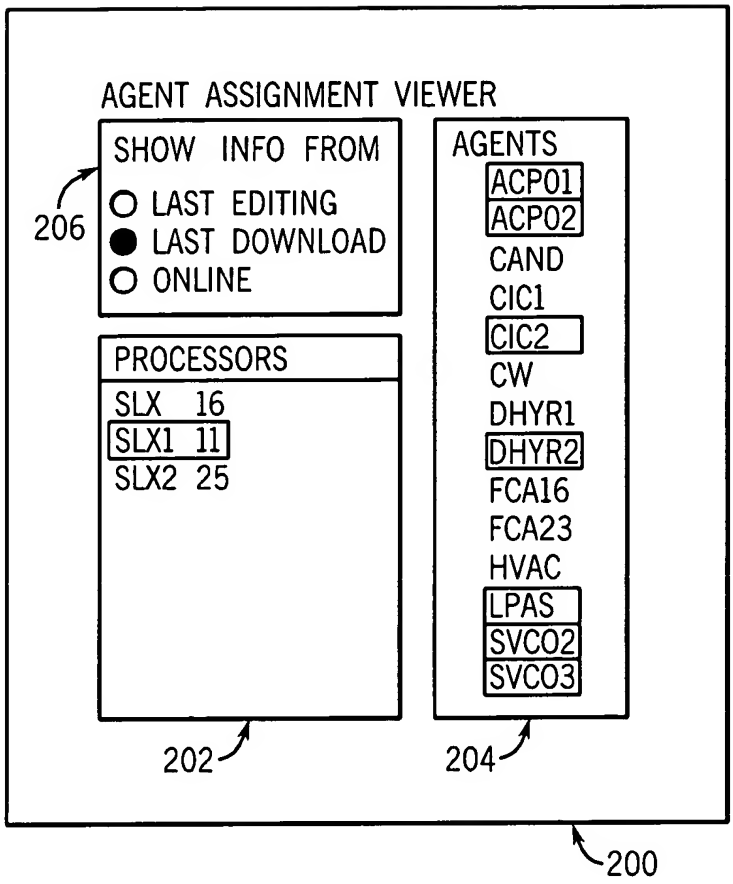

AGENT ASSIGNMENT VIEWER
SHOW INFO FROM
LAST EDITING
LAST DOWNLOAD
ONLINE
206
PROCESSORS
SLX 16
SLX1 11
SLX2 25
202
AGENTS
ACP01
ACP02
CAND
CIC1
CIC2
CW
DHYR1
DHYR2
FCA16
FCA23
HVAC
LPAS
SVC02
SVC03
204
200

FIG. 12

CREATION
208
COMMITMENT
210
EXECUTION
212

FIG. 13